ABSTRACT

A post-clipping method in the coding system for fine granularity scalability (FGS) video coding is applicable to both encoders and decoders. The FGS enhancement layer encoding and decoding operations can be mapped to simple motion compensation operations. Consequently, they can be implemented by using existing data and control paths in the base layer encoder and decoder. The base layer encoder and decoder thus need not be changed. The enhancement encoding and decoding processing is independent of any intermediate data in the base layer as a result of a change in the calculation of the enhancement layer quantization residue. In particular, the quantization residue in the enhancement layer encoder is defined as the difference between the original video data and the reconstructed base layer video data. The enhancement layer encoder thus does not depend upon intermediate base layer data during the coding process. Similar to the encoder, the decoder for the post-clipping addition method also decouples the base layer decoding process and enhancement layer decoding process. The enhancement layer decoding process can be mapped into a simple motion compensation case using the base layer picture as reference